

Report Documentation Page			Form Approved OMB No. 0704-0188		
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1. REPORT DATE 31 MAR 2011		2. REPORT TYPE		3. DATES COVERED 00-00-2011 to 00-00-2011	
4. TITLE AND SUBTITLE Coherent Distributed Radar For High-Resolution Through-Wall Imaging			5a. CONTRACT NUMBER		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S)			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Office Of Naval Research,Arlington,VA,22203			8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSOR/MONITOR'S ACRONYM(S)		
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 3	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Intelligent Automation Incorporated

Coherent distributed radar for high-resolution through-wall imaging

Technical Report - FY11 Experiment Data Documentation

Contract No. N00014-10-C-0277

Sponsored by

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Distribution Statement A: Approved for public release; distribution unlimited.

Technical Report - FY11 Experiment Data Documentation

Summary

In this period of performance, we are continuing to develop the radar design, software, and software for the final demonstration. We are also ordering and building the final demonstration hardware.

1.0 INTRODUCTION

In this report we discuss progress in system development and experiments performed in FY11.

1.1 Software design

We continue to develop the software application at the receiver. Specifically, we are integrating a prior C program that was developed to acquire DGPS signal, with a compass, so that the position of the radar antenna can be estimated with $\sim 2\text{cm}$ accuracy. We have completed the C-code that reports the DGPS readings through a serial interface, along with time stamps, and an indication of data quality. We show a screen shot of the reported GPS position below.

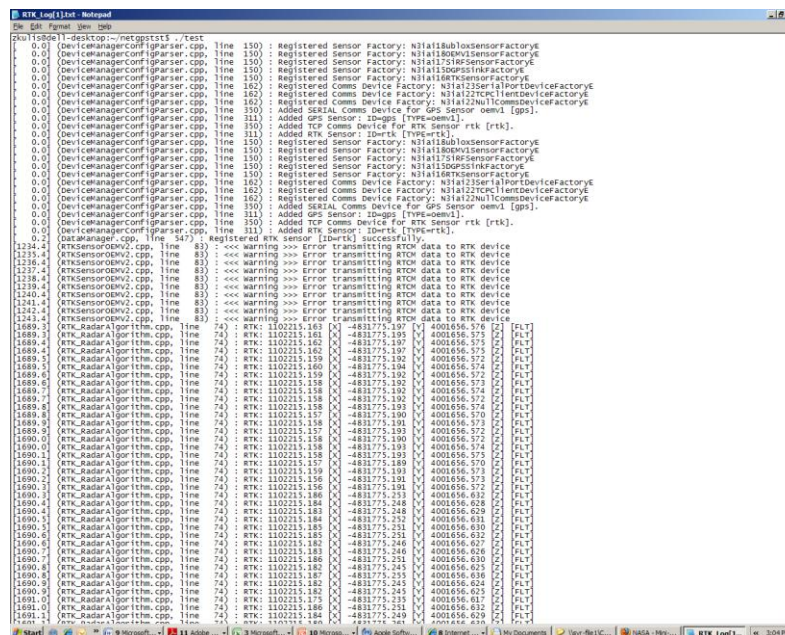


Figure 1 STK Log file screen shot

1.2 Experiments in FY011

To date, we completed a wireless, laboratory based frequency synchronization experiment with the completed hardware.